SCIENTIFIC NOTE

A FOURTH FLORIDIAN RECORD OF THE CENTIPEDE GENUS *RHYSIDA* WOOD, 1862; POTENTIAL ESTABLISHMENT OF *R. L. LONGIPES* (NEWPORT, 1845) IN MIAMI-DADE COUNTY (SCOLOPENDROMORPHA: SCOLOPENDRIDAE: OTOSTIGMINAE)[1]

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The scolopendrid centipede subfamily Otostigminae is represented in the Western Hemisphere by two genera, *Otostigmus* Porat, 1876 (only the subgenus *Parotostigmus* Pocock, 1896, occurs here), and *Rhysida* Wood, 1862, neither of which is native to the continental United States (Shelley 2002). There is an old, uncorroborated record of *R. longipes* (Newport, 1845)[4] from Fort Jefferson, Dry Tortugas National Park, Florida (Wood 1862), and six authors have reported *R. celeris* (Humbert & Saussure, 1870) from "Carolina" and Georgia (Humbert & Saussure 1870, Kohlrausch 1881, Underwood 1887, Pocock 1896, Kraepelin 1903, Attems 1930). However, Crabill (1960) expressed doubt that the latter was established here, and Shelley (2002) agreed, deleting it from the North American fauna. Neither *Otostigmus* nor *Rhysida* has been revised, and they are on a list of seven scolopendromorph genera that particularly need "taxonomic attention" (Lewis 2003). Literature records are therefore confusing and probably unreliable, but the northernmost of the *Otostigminae* in the Americas are *R. nuda immarginata* (Porat, 1876), from Durango, Mexico; *R. l. longipes* from Sinaloa and St. Croix, US Virgin Islands; *O. (P.) denticulatus* (Pocock, 1896), from Guerrero, Mexico, and Guatemala; *R. n. nuda* (Newport, 1845), from Belize, Guatemala, El Salvador, Cuba, and Haiti; *O. (P.) occidentalis* Meinert, 1886, from Haiti; and *O. (P.) caraibicus* Kraepelin, 1903, from Puerto Rico, the US Virgin Islands (St. Thomas and St. John), and St. Kitts (Meinert 1886; Pocock 1896; Kraepelin 1903; Chamberlin 1918, 1921, 1950; Attems 1930; Bücherl 1974; Lewis 1989).

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[4] Opinions differ as to whether to recognize subspecies in *R. longipes*. In the "modern era," Attems (1930) recognized three races and one variety, but Koch (1985) synonymized *R. l. kurandana* Chamberlin, 1920, under *R. nuda* (Newport, 1845). Takakuwa (1935), Verhoeff (1937), and Loksa (1971) proposed three new subspecies for forms from Asia, all summarized by Lewis (2002), but Bücherl (1974), Shelley and Edwards (1987), and Shelley (2002) did not recognize races at all. As Lewis' treatment (2002) is the most recent and comprehensive, we accept his assessment and assign the Florida specimens to the nominate race, the only one recognized in the Americas.

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No specimen of *Otostigmus* has ever been taken to the north, but representatives of *Rhysida* have been intercepted four times in quarantines at US ports since 1937 (Shelley 2002), and single individuals of *R. l. longipes* have been encountered three times in south Florida, in 1956-57 in Miami and South Miami, Miami-Dade County, and in 1962 in a home in Key West, Monroe County (Chamberlin 1958, Crabill 1960, Shelley 2002). Shelley and Edwards (1987) therefore included *R. l. longipes* in their key to Floridian scolopendromorphs, but as no specimens had been encountered for 40 years, Shelley (2002) concluded that it had not established reproducing populations.

While it is premature to rescind this conclusion, there is now reason to question it. On April 15, 2004, two inspectors from the US Department of Agriculture discovered 5-6 moderately large scolopendrid centipedes on grass beneath a piece of plywood outside a warehouse in the vicinity of Hialeah, Miami-Dade County; this site is some 15 mi (24 km) northwest of the Port of Miami, so the centipedes cannot be regarded as "interceptions." Two individuals were captured and sent to the second author, where they were accessioned as Florida State Collection of Arthropods sample #E-2004-2872 and sent to the first author for determination. The centipedes are ca. 57 mm long and 7 mm wide, and are a subuniform green dorsally that fades into light olive-brown on the last three tergites; the prefemora of the ultimate legs are light brownish, and the remaining podomeres are light green. They are clearly referrable to *Rhysida* because the first tergite overlaps the base of the cephalic plate; the spiracles are circular and non-valvular; and a pair of spiracles is present on segment 7. Key anatomical features are as follows: antennae (both broken, left with 4 antennomeres and right with 15) with three basalmost articles sparsely hirsute; teeth on coxosternal tooth plates 4+4, medial two on each plate indistinct and subequal in height; trochanteroprefemoral process long, apically subacuminate, without additional teeth; dorsal paramedian sutures present on tergites 4-20, lateral margination evident on 9-21; ultimate tergite smooth, without sutures, strongly marginate, edges elevated into low but distinct carinae; sterna smooth, with short paramedian sutures arising from anterior margins on sternites 3-18 and weak caudomedial depressions on 7-19; sternite 21 wider than long, sides converging caudally, caudal margin slightly concave; coxopleural processes with three end and one lateral spines each; prefemora of ultimate legs with ventral, ventromedial, and dorsomedial rows of three equidistantly spaced spines apiece, distalmost of latter at distomedial corner; legs 1-4 with one short distal spine each on anterior surfaces of tibiae; 1st tarsi with two ventrodistal spines on legs 1-11 and one on legs 12-19; two accessory claws present on legs 1-19. These features are compatible with the variation in *R. l. longipes* as characterized by Attems (1930) and Lewis (2002); based on proximity, the specimens are probably neotropical in origin, but theoretically, they could have come from anywhere within the species' range, which encompasses parts of the East Indies, Asia, Indian Ocean islands, and Africa as well as the Americas (Lewis 2002). From the circumstances of this discovery, it seems that the inspectors may have accidentally found representatives

of a larger population of this species that lives, reproduces, and is now established in this region of Miami-Dade County. Somewhat simultaneously, EMV (see Acknowledgments below) spotted a centipede with similar coloration outside a warehouse in West Palm Beach. It eluded capture and may also have been *R. l. longipes,* but two native south Floridian scolopendrids (both in the Scolopendrinae), *Scolopendra viridis* Say, 1821, and *Hemiscolopendra marginata* (Say, 1821) (Shelley and Edwards 1987, Hoffman and Shelley 1996, Shelley 2002), are similar enough in size and color that a non-specialist could confuse these species. We therefore cannot say that *R. l. longipes* occurs in Palm Beach County but note the possibility for future reference.

As south Florida harbors numerous non-native species, we place on record the fourth capture of these allochthonous centipedes, and the first with more than one individual, because *R. l. longipes* may now be an established component of regional ecosystems. Concerted sampling around the same time of year is needed in and around Hialeah, possibly using pitfall traps, to attempt to gather additional individuals and determine whether *R. l. longipes* truly occupies this region of Miami-Dade County. Sampling efforts to the north will document whether the centipede also occurs in Palm Beach County.

One individual has been deposited in each author's institution.

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